

WHAT IS CLAIMED IS:

Sub  
Pr

1. A liquid crystal projector apparatus which includes a liquid crystal panel for optically modulating light from a light source with an input signal and projects the optically modulated light from said liquid crystal panel to display an image, characterized in that it comprises

a temperature sensor for detecting a temperature at a location in said liquid crystal projector apparatus except said liquid crystal panel,

a memory for storing temperature detection data obtained by said temperature sensor within a period from a power supply starting time to a steady operation entering time of said liquid crystal projector apparatus,

arithmetic operation means for estimating a temperature of said liquid crystal panel based on the temperature detection data stored in said memory to indirectly obtain the temperature of said liquid crystal panel, and

a liquid crystal drive section for correcting a drive voltage for driving said liquid crystal panel with an output signal of said arithmetic operation means and applying the corrected drive voltage to said liquid crystal panel.

2. A liquid crystal projector apparatus according to claim 1, wherein said liquid crystal drive section controls a dc component of the drive voltage to be applied to said liquid crystal panel to correct the voltage.

3. A liquid crystal projector apparatus according to claim 2, wherein said light source and said liquid crystal panel are disposed in a housing, and said liquid crystal projector apparatus further comprises cooling means for circulating air in said housing without taking in external air to cool said liquid crystal panel in said housing.

4. A liquid crystal projector apparatus according to claim 3, wherein

said liquid crystal panel includes a liquid crystal panel for red, a liquid crystal panel for green and a liquid crystal panel for blue, and said liquid crystal drive section includes

a first liquid crystal drive section for correcting a drive voltage for driving said liquid crystal panel for red with an output signal of said arithmetic operation means and applying the corrected drive voltage to said liquid crystal panel for red,

a second liquid crystal drive section for

correcting a drive voltage for driving said liquid crystal panel for green with another output signal of said arithmetic operation means and applying the corrected drive voltage to said liquid crystal panel for green, and

a third liquid crystal drive section for correcting a drive voltage for driving said liquid crystal panel for blue with a further output signal of said arithmetic operation means and applying the corrected drive voltage to said liquid crystal panel for blue.

5. A liquid crystal projector apparatus according to claim 1, further comprising a room temperature detection sensor for detecting a room temperature separately from said temperature sensor, and wherein said arithmetic operation means arithmetically operates, at the power supply starting time, a difference between the temperature detection data of said temperature sensor and room temperature detection data of said room temperature detection sensor.

6. A driving method for a liquid crystal projector apparatus which includes a liquid crystal panel for optically modulating light from a light source with an input signal and projects the optically modulated light from said liquid crystal panel to display an image,

characterized in that it comprises

a temperature detection step of detecting a temperature at a location in said liquid crystal projector apparatus except said liquid crystal panel by means of a temperature detector,

an arithmetic operation step of storing temperature detection data obtained by said temperature sensor within a period from a power supply starting time to a steady operation entering time of said liquid crystal projector apparatus into a memory and estimating a temperature of said liquid crystal panel based on said temperature detection data stored in said memory to indirectly obtain the temperature of said liquid crystal panel by means of arithmetic operation means, and

a drive voltage supplying step of correcting a drive voltage for driving said liquid crystal panel with an output signal of said arithmetic operation means by a liquid crystal drive section and applying the corrected drive voltage to said liquid crystal panel.

7. A driving method for a liquid crystal projector apparatus according to claim 6, wherein said liquid crystal drive section controls a dc component of the drive voltage to be applied to said liquid crystal panel to correct the voltage.

8. A driving method for a liquid crystal projector apparatus according to claim 7, wherein said light source and said liquid crystal panel are disposed in a housing, and cooling means circulates air in said housing without taking in external air to cool said liquid crystal panel in said housing.

9. A driving method for a liquid crystal projector apparatus according to claim 8, wherein

said liquid crystal panel includes a liquid crystal panel for red, a liquid crystal panel for green and a liquid crystal panel for blue, and wherein

a first liquid crystal drive section corrects a drive voltage for driving said liquid crystal panel for red with an output signal of said arithmetic operation means and applies the corrected drive voltage to said liquid crystal panel for red,

a second liquid crystal drive section corrects a drive voltage for driving said liquid crystal panel for green with another output signal of said arithmetic operation means and applies the corrected drive voltage to said liquid crystal panel for green, and

a third liquid crystal drive section corrects a drive voltage for driving said liquid crystal panel for blue with a further output signal of said arithmetic

2025-11-14 14:44:44

operation means and applies the corrected drive voltage to said liquid crystal panel for blue.

10. A driving method for a liquid crystal projector apparatus according to claim 6, wherein said liquid crystal projector apparatus further comprises a room temperature detection sensor for detecting a room temperature separately from said temperature sensor, and said arithmetic operation means arithmetically operates, at the power supply starting time, a difference between the temperature detection data of said temperature sensor and room temperature detection data of said room temperature detection sensor.